UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,838	08/31/2001	Michael A. D'Annunzio	7784-000193	2811

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EXAMINER
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ART UNIT	PAPER NUMBER
2144	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/943,838	D'ANNUNZIO ET AL.
	Examiner	Art Unit	
	Tam (Jenny) Phan	2144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 December 2004</u>.

2a)☒. This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-9,13,15-21 and 23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-9,13,15-21 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>31 August 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This application has been examined. Amendment received on 12/30/2004 has been

entered. Claims 2, 10-12, 14, and 22 are cancelled. Claims 1, 7, 13, and 20 are currently

amended.

2.   Claims 1, 3-9, 13, 15-21, and 23 are presented for examination.

Priority

3.   No priority claims have been made.

4.   The effective filing date for the subject matter defined in the pending claims in this

application is 08/31/2001.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 1, 3-9, 13, 15-21, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable

over Carneal et al. (WO 99/08429), hereinafter referred to as Carneal in view of Gupta (U.S.

Patent Number 6,212,565).

7.   Regarding claim 1, Carneal disclosed a communications system for providing a

communications link between a ground station and a mobile platform via a satellite (Abstract)

comprising: a parent proxy server connected to a ground station (Abstract, Figures 3, 5-6, page 5

lines 6-15, page 8 lines 11-19); a child proxy server located on a mobile platform (Abstract,

Figures 3, 5-6, page 5 lines 6-15, page 8 lines 11-19); a user communication device (UCD)

located on said mobile platform and connected to said child proxy server (Figures 5-6, page 6

lines 13-20, page 20 lines 3-5); and wherein said child and parent proxy servers establish a

communication link between said mobile platform and said ground station (Abstract, Figure 6,

page 4 lines 11-20).

8.   Carneal taught the invention substantially as claimed. However, Carneal did not

expressly teach the limitation wherein said child and parent proxy servers establish a persistent

transmission control protocol (TCP) link between said mobile platform and said ground station.

9.   Carneal suggested exploration of art and/or provided a reason to modify the

communication link with the persistent transmission control protocol (TCP) link (page 4 line 28-

column 5 line 2, column 20 lines 6-13).

10.   Gupta disclosed a communication system wherein said child and parent proxy servers

establish a persistent transmission control protocol (TCP) link (column 2 lines 1-13, lines 22-49,

page 3 lines15-26, page 9 lines 29-35).

11.   It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to modify the communication link of Carneal with the teachings of Gupta to include

the persistent transmission control protocol (TCP) link in order to save processing time between

child and parent proxies since multiple http transfer can use the same connection without having

to establish a new connection each time (Gupta, column 2 lines 1-13). In addition, use of

persistent TCP connection would help minimize network traffic, since there is no need to open

several different connections (Gupta, column 9 lines 29-35).

12. Regarding claim 3, Carneal disclosed a communications system further comprising: a router that is located on said mobile platform and that is connected to said child proxy server (Figures 5-6).

13. Regarding claim 4, Carneal disclosed a communications system further comprising: a web cache service that is located on said mobile platform and that is connected to said child proxy server (Figure 6).

14. Regarding claim 5, Carneal disclosed a communications system wherein said web cache service stores web pages in cache (page 9 lines 1-7, 9-13).

15. Regarding claim 6, Carneal disclosed a communications system wherein said child proxy server accesses said web pages in said web cache service if said UCD requests access to said web pages (Figure 7, page 5 lines 19-21, claim 2).

16. Regarding claim 7, Carneal and Gupta combined disclose a communications system for providing a communications link between a distributed communications system and a mobile platform via a satellite (Abstract), comprising: a ground station; a parent proxy server connected to said ground station; a distributed communications system connected to said parent proxy server; a satellite that communicates with said ground station; a transceiver located on a mobile platform that communicates with said satellites; a router connected to said transceiver; a child proxy server connected to said router; a web cache service that is located on said mobile platform and that is connected to said child proxy server (Carneal, Figures 5-6, page 9 lines 1-7); a user communication device (UCD) connected to said child proxy server (Carneal, Abstract, Figures 3, 5-6, page 4 lines 11-21, page 5 lines 6-15, page 8 lines 11-19), wherein said child and parent proxy servers establish a persistent transmission control protocol (TCP) link between said mobile

platform and said ground station (Gupta, column 2 lines 1-13, lines 22-49, page 3 lines15-26,

page 9 lines 29-35); and wherein said web cache service stores web pages (Carneal, page 9 lines

1-7, lines 9-13) and said child proxy server accesses said web pages in said web cache service if

said UCD requests access to said web pages (Carneal, Figure 7, page 5 lines 19-21, claim 2).

17.   Regarding claim 8, Carneal disclosed a communications system wherein said UCD

connects to said child proxy server using a first group of TCP settings (Abstract, Figures 5-6,

page 5 lines 7-15).

18.   Regarding claim 9, Carneal disclosed a communications system wherein said parent and

child proxy servers communicate using a second group of TCP settings (Abstract, Figures 5-6,

page 5 lines 7-15).

19.   Regarding claims 13 and 15-18, the method for providing a communication link

corresponds directly to the system of claims 1 and 3-6, and thus these claims are rejected using

the same rationale.

20.   Regarding claim 19, Carneal and Gupta combined disclose a method wherein said UCD

connects to said child proxy server using a first group of TCP settings and wherein said child and

parent proxy servers communicate using a second group of TCP settings to optimize said

persistent link (Carneal, Abstract, Figures 5-6, page 11 lines 20-25; Gupta, Figure 3 sign 309,

column 2 lines 1-13, lines 22-49, column 3 lines 15-26).

21.   Regarding claim 20, Carneal and Gupta combined disclose a method for providing a

communications link for mobile platforms via a satellite (Abstract), comprising the steps of:

connecting a parent proxy server to a ground station; providing a transceiver on a mobile

platform; connecting a child proxy server to said transceiver; connecting a user communication

device (UCD) to said child proxy server (Carneal, Abstract, Figures 5-6); establishing a

communications link between said transceiver and said ground station via a satellite; and setting

transmission control protocol (TCP) parameters of said communications link between said child

and parent proxy servers for satellite links (Carneal, Figures 5-6, page 4 lines 11-27, page 8 lines

11-19; Gupta, Figure 3 sign 309, column 2 lines 1-13, lines 22-49, column 3 lines 15-26).

22.   Regarding claim 21, Carneal disclosed a method further comprising the step of

connecting a distributed communications system to said parent proxy server (Abstract, Figures 5-

6).

23.   Regarding claim 23, Carneal disclosed a method wherein said UCD connects to said child

proxy server using a first group of TCP settings and wherein said child and parent proxy servers

communicate using a second group of TCP settings (Abstract, Figures 5-6, page 5 lines 6-15).

24.   Since all the limitations of the claimed invention were disclosed by the combination of

Carneal and Gupta, claims 1, 3-9, 13, 15-21, and 23 are rejected.

25.   Claims 1, 3-9, 13, 15-21, and 23 rejected under 35 U.S.C. 103(a) as being unpatentable

over Zhang et al. ("An In-depth Survey on Web Caching"), hereinafter referred to as Zhang, in

view of Dillon et al. (U.S. Patent Number 6,658,463), hereinafter referred to as Dillon.

26.   Regarding claim 1, Zhang disclosed a communications system for providing a

communications link between a server and a client (Title) comprising: a parent proxy server

connected to a server; a child proxy server located on a client (page 17 Figure 6.1 and associated

text); wherein said child and parent proxy servers establish a persistent transmission control

protocol (TCP) link between said client and said server (page 13 section 5.1.2 Proxy Servers,

pages 19-20 section HTTP connections are persistent).

27.   Zhang taught the invention substantially as claimed. However, Zhang did not expressly

teach a satellite communications networks having ground station, mobile platform, etc.

28.   Zhang suggested exploration of art and/or provided a reason to modify the

communication system of Zhang with the satellite communications network (page 14 section

5.2.2 Hardware Approach paragraph 6).

29.   Dillon disclosed a satellite communication system including an upstream proxy server

[parent proxy] connected to a ground station and downstream proxy server [child proxy]

connected to internetwork platform [mobile platform] wherein said child and parent proxy

servers establish a persistent transmission control protocol (TCP) link between said ground

station and said mobile platform (Figures 2-3, 6-7, column 13 lines 27-34) and a user

communication device (UCD) located on said mobile platform and connected to said child proxy

server (Figure 4, column 13 lines 12-20, column 24 lines 33-36).

30.   It would have been obvious to one of ordinary skill in the art at the time of the invention

was made to modify the communication network of Zhang with the teachings of Dillon to

include the satellite communications network since satellite is an excellent mechanism for carry

multicast data as a multicast packet need only be transmitted once to be received by any number

of terminals (Dillon, column 3 lines 47-53). In addition, Satellite multicast data systems are

typically engineered with FEC coding in such a way that the system is quasi-error free (Dillon,

column 3 lines 53-57).

31.   Regarding claim 3, Zhang disclosed a communications system further comprising: a

router that is located on said mobile platform and that is connected to said child proxy server

(page 24 Section Some Disadvantages of ICP, page 28 section 8.6 Cache Engine).

32.   Regarding claim 4, Dillon disclosed a communications system further comprising: a web

cache service that is located on said mobile platform and that is connected to said child proxy

server (Figures 4-5, 6-7).

33.   Regarding claim 5, Zhang disclosed a communications system wherein said web cache

service stores web pages in cache (Title, Abstract, page 3 section 1. Introduction).

34.   Regarding claim 6, Zhang disclosed a communications system wherein said child proxy

server accesses said web pages in said web cache service if said UCD requests access to said

web pages (page 3 section 1. Introduction, page 17 Figure 6.1).

35.   Regarding claim 7, Zhang and Dillon combined disclose a communications system for

providing a communications link between a distributed communications system and a mobile

platform via a satellite comprising: a ground station; a parent proxy server connected to said

ground station; a distributed communications system connected to said parent proxy server; a

satellite that communicates with said ground station; a transceiver located on a mobile platform

that communicates with said satellites; a router connected to said transceiver; a child proxy

server connected to said router; a web cache service that is located on said mobile platform and

that is connected to said child proxy server (Dillon, Figures 4-5, 6-7); a user communication

device (UCD) connected to said child proxy server, wherein said child and parent proxy servers

establish a persistent transmission control protocol (TCP) link between said mobile platform and

said ground station (Zhang, page 17 Figure 6.1 and associated text, page 13 section 5.1.2 Proxy

Servers, pages 19-20 section HTTP connections are persistent, page 28 section 8.6 Cache

Engine; Dillon, Figures 4-5, 6-7, column 13 lines 27-34); and wherein said web cache service

stores web pages (Zhang, Title, Abstract, page 3 section 1. Introduction) and said child proxy

server accesses said web pages in said web cache service if said UCD requests access to said

web pages (Zhang, page 3 section 1. Introduction, page 17 Figure 6.1).

36.   Regarding claim 8, Dillon disclosed a communications system wherein said UCD

connects to said child proxy server using a first group of TCP settings (Figures 6-7).

37.   Regarding claim 9, Dillon disclosed a communications system wherein said parent and

child proxy servers communicate using a second group of TCP settings (Figures 6-7).

38.   Regarding claims 13 and 15-18, the method for providing a communication link

corresponds directly to the system of claims 1 and 3-6, and thus these claims are rejected using

the same rationale.

39.   Regarding claim 19, Zhang disclosed a method wherein said UCD connects to said child

proxy server using a first group of TCP settings and wherein said child and parent proxy servers

communicate using a second group of TCP settings to optimize said persistent link (Figures 4-5,

6-7, column 13 lines 27-34).

40.   Regarding claim 20, Zhang and Dillon combined disclose a method for providing a

communications link for mobile platforms via a satellite (Abstract), comprising the steps of:

connecting a parent proxy server to a ground station; providing a transceiver on a mobile

platform; connecting a child proxy server to said transceiver; connecting a user communication

device (UCD) to said child proxy server (Zhang, page 17 Figure 6.1 and associated text);

establishing a communications link between said transceiver and said ground station via a

satellite; and setting transmission control protocol (TCP) parameters of said communications link

between said child and parent proxy servers for satellite links (Zhang, page 17 Figure 6.1 and

associated text, page 13 section 5.1.2 Proxy Servers, pages 19-20 section HTTP connections are

persistent, page 28 section 8.6 Cache Engine; Dillon, Figures 4-5, 6-7, column 13 lines 27-34).

41.   Regarding claim 21, Zhang disclosed a method further comprising the step of connecting

a distributed communications system to said parent proxy server (page 17 Figure 6.1 and

associated text).

42.   Regarding claim 23, Dillon disclosed a method wherein said UCD connects to said child

proxy server using a first group of TCP settings and wherein said child and parent proxy servers

communicate using a second group of TCP settings (Figures 4-5, 6-7, column 13 lines 27-34).

43.   Since all the limitations of the claimed invention were disclosed by the combination of

Zhang and Dillon, claims 1, 3-9, 13, 15-21, and 23 are rejected.

Response to Arguments

44.   Applicant's arguments filed 12/30/2004 have been fully considered but they are not

persuasive.

45.   In response to applicant's argument that Carneal does not disclose the use of a UCD (user

communication device) on a mobile platform, and further does not mention a mobile platform,

the Examiner respectfully disagrees. Carneal disclosed a digital user terminal capable of

executing web-browsing software that is connected to a child proxy server using a wireless link.

Carneal disclosed, "The use of wireless communication systems for the transmission of digital

data is becoming more and more pervasive. In a wireless system, the most precious resource in

terms of cost and availability is typically the wireless link itself. Therefore, one major design

goal in designing a communication system comprising a wireless link is to efficiently use the

available capacity of the wireless link. In addition, typically, the delay associated with traversing

the wireless link is significantly larger than the delay associated with the remainder of the

network. Therefore, it is also desirable to reduce the delay associated with use of a wireless link"

(page 1 lines 13-20), it should be obvious then that the digital user terminal connected to the

child proxy server is equivalent via a wireless link is equivalent to the UCD connected to the

child proxy server on a mobile platform. In addition, applicant's argued that "Carneal is directed

towards improving network communications between multiple land based computers which

would normally be connected together through telephone lines", it is submitted that although

Carneal disclosed the use of wire line as suggested by the applicant, Carneal also disclosed "the

teachings of the invention may be directly applied to any link which introduces significant delay

whether a wire line or wireless link" (page 20 lines 3-5).

46.   In response to applicant's argument that Dillon does not disclose the use of a UCD (user

communication device) on a mobile platform, it is submitted that Dillon disclosed, "This is

particularly important when the inbound channel is a shared wireless medium such as a VSAT

inroute or some other wireless medium. It effectively allows many more subscribers to share the

available inbound bandwidth. Request Batching--batches HTTP requests which arrive at nearly

the same time so that the requests get sent over the satellite in a single TCP segment, thereby

reducing the number of inbound packets" (column 13 lines 12-20) and "the multicast network

126 need not be based on geosynchronous satellite technology but could be based on any of a

number of other multicast technologies including wireless terrestrial broadcast systems" (column

24 lines 33-36). Dillon further disclosed a user device that is capable of executing a web

browser application (Figure 5 sign 122s). Thus, it would have been obvious that Dillon taught

the use of a user communication device in a mobile and wireless network. In addition, it is also

submitted that the use of a user communication device on a wireless and mobile platform are

well known in the art at the time of the invention was made as exemplify in the cited prior art of

record.

47.   In response to applicant's argument that Carneal, Gupta, Zhang, and Dillon are all silent

as to the use of a UCD on a mobile platform to access web pages, the Examiner respectfully

disagrees. Carneal, Gupta, Zhang, and Dillon all taught the use of a user communication device

capable of executing a web browser application for accessing web pages. For example, Carneal

disclosed, "When a user would like to access information on the Internet, the user enters a

uniform resource locator (URL) into the web browser. The URL is basically a pointer to the

location of an object. For example,"http:\\www.internic.net\rfc\rfc1738.txt" is the URL address

which points to a Request For Comment document which describes uniform resource locators"

(page 1 lines 30-page 2 lines 8) and Carneal also disclosed "HTTP provides a means for a web

browser to access a web server and request documents created using the HyperText Markup

Language (HTML). HTML web pages can include images, sound clips, text files and other types

of objects. Some of the objects may not be part of the original HTML parent file (the base

component of the Web document) requested by the web browser 20". Dillon disclosed "Table 1

illustrates the cumulative effect of this on a HTML page, like www.cnn.com, containing 30

URLs in terms of the total number of inbound packets and the total delay for accessing such a

web page" (column 11 lines 58-61, column 12 Table 1). While the Examiner can cite other

numerous examples from Carneal and Dillon as well as from Gupta and Zhang, the above

examples from Carneal and Dillon should be sufficient to show that the teachings of using a user

communication device capable of executing a web browser application for accessing web pages

are obvious.

48.   As the rejection reads, Examiner asserts that the combination of these teachings render

the claimed invention obvious.

Conclusion

49.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

50.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Refer to the enclosed PTO-892 for details.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tam (Jenny) Phan whose telephone number is (571) 272-3930.

The examiner can normally be reached on M-F 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 21, 2005

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